TO8280 "EETHOOO

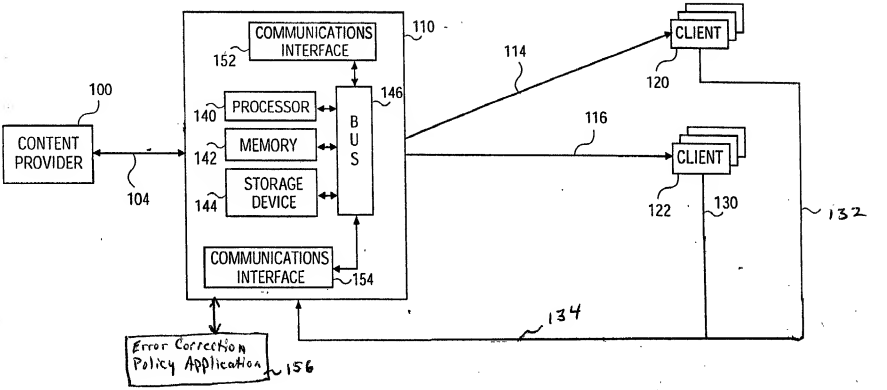
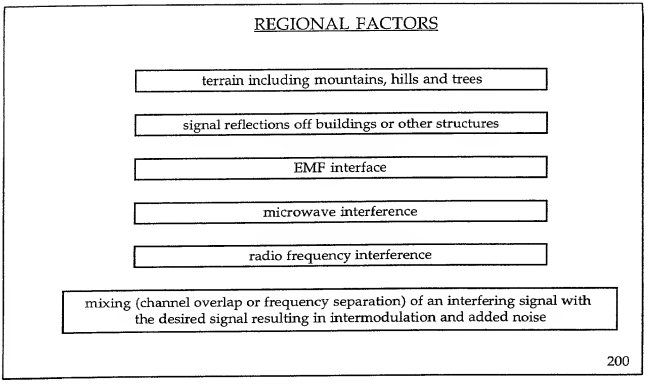
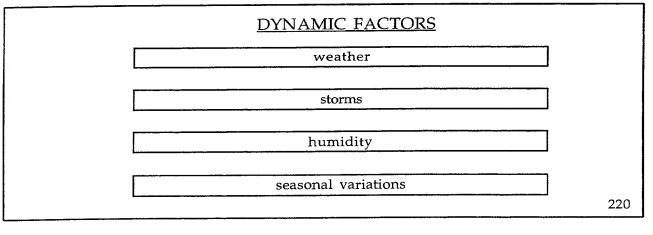


FIG. 1


REGIONAL FACTORS
terrain including mountains, hills and trees
signal reflections off buildings or other structures
EMF interface
microwave interference
radio frequency interference
mixing (channel overlap or frequency separation) of an interfering signal with the desired signal resulting in intermodulation and added noise
200


DYNAMIC FACTORS
weather
storms
humidity
seasonal variations
220

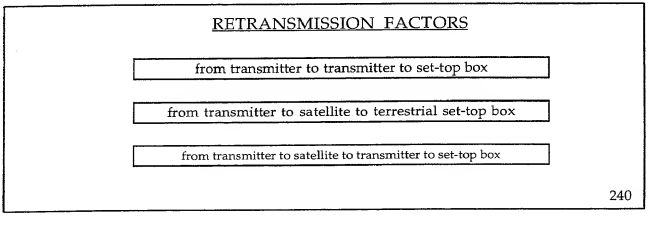

RETRANSMISSION FACTORS
from transmitter to transmitter to set-top box
from transmitter to satellite to terrestrial set-top box
from transmitter to satellite to transmitter to set-top box
240

FIG. 2

Error Correction Policy Application

controls and optimizes bandwidth and Quality of Service (QOS) of a given broadcast based on regional factors including terrain, dynamic factors including weather and season, and retransmission factors

compares the transmitted data errors to at least one of a predetermined tolerable transmitted data error level and a predetermined tolerable transmitted data error level for a predetermined time period

utilizes error correction coding and error detection coding

utilizes Forward Error Correction (FEC)

dynamically adjusts error correction levels

utilizes convolutional (tree) codes and block codes

measures bit error rates in terms of quantity of bit errors occurring over some unit of time

no other error analysis input is required for error correction other than error reporting by the set-top box

FIG. 3

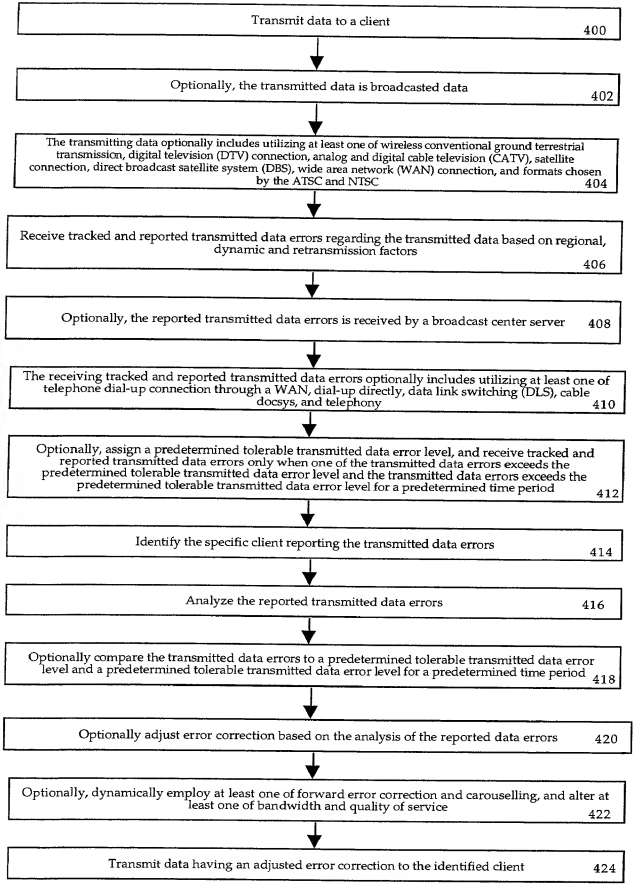

Transmit data to a client
400
Optionally, the transmitted data is broadcasted data
402
The transmitting data optionally includes utilizing at least one of wireless conventional ground terrestrial transmission, digital television (DTV) connection, analog and digital cable television (CATV), satellite connection, direct broadcast satellite system (DBS), wide area network (WAN) connection, and formats chosen by the ATSC and NTSC
404
Receive tracked and reported transmitted data errors regarding the transmitted data based on regional, dynamic and retransmission factors
406
Optionally, the reported transmitted data errors is received by a broadcast center server
408
The receiving tracked and reported transmitted data errors optionally includes utilizing at least one of telephone dial-up connection through a WAN, dial-up directly, data link switching (DLS), cable docsys, and telephony
410
Optionally, assign a predetermined tolerable transmitted data error level, and receive tracked and reported transmitted data errors only when one of the transmitted data errors exceeds the predetermined tolerable transmitted data error level and the transmitted data errors exceeds the predetermined tolerable transmitted data error level for a predetermined time period
412
Identify the specific client reporting the transmitted data errors
414
Analyze the reported transmitted data errors
416
Optionally compare the transmitted data errors to a predetermined tolerable transmitted data error level and a predetermined tolerable transmitted data error level for a predetermined time period
418
Optionally adjust error correction based on the analysis of the reported data errors
420
Optionally, dynamically employ at least one of forward error correction and carouselling, and alter at least one of bandwidth and quality of service
422
Transmit data having an adjusted error correction to the identified client
424

FIG. 4

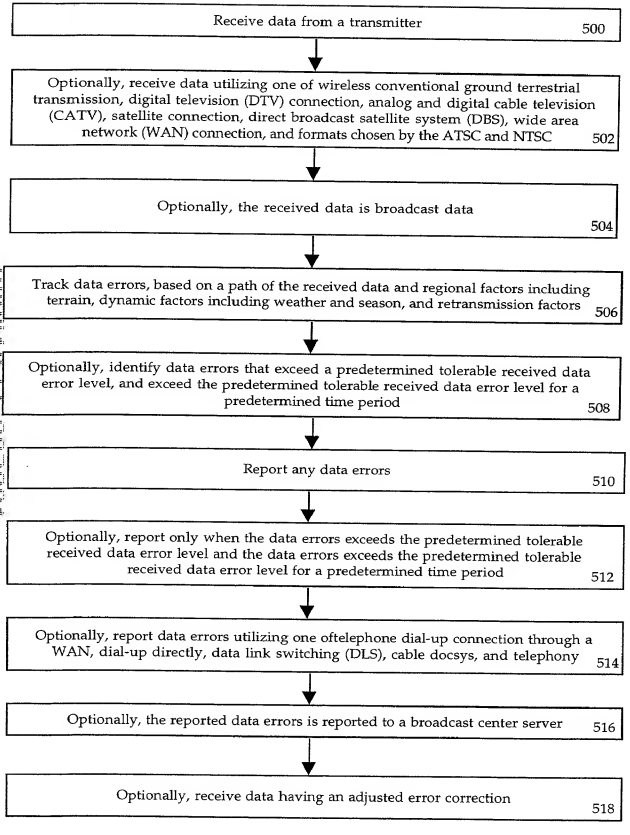

Receive data from a transmitter
500
Optionally, receive data utilizing one of wireless conventional ground terrestrial transmission, digital television (DTV) connection, analog and digital cable television (CATV), satellite connection, direct broadcast satellite system (DBS), wide area network (WAN) connection, and formats chosen by the ATSC and NTSC
502
Optionally, the received data is broadcast data
504
Track data errors, based on a path of the received data and regional factors including terrain, dynamic factors including weather and season, and retransmission factors
506
Optionally, identify data errors that exceed a predetermined tolerable received data error level, and exceed the predetermined tolerable received data error level for a predetermined time period
508
Report any data errors
510
Optionally, report only when the data errors exceeds the predetermined tolerable received data error level and the data errors exceeds the predetermined tolerable received data error level for a predetermined time period
512
Optionally, report data errors utilizing one oftelephone dial-up connection through a WAN, dial-up directly, data link switching (DLS), cable docsys, and telephony
514
Optionally, the reported data errors is reported to a broadcast center server
516
Optionally, receive data having an adjusted error correction
518

FIG. 5